

**ABSTRACT OF THE DISCLOSURE**

An adjustable iris-diaphragm controller includes a brushless direct current (DC) motor, an iris defining an aperture that corresponds to an angular position of the DC motor, and a control module including a differential circuit, an integrator, and a current-limiting circuit. The differential circuit provides an output voltage corresponding to a difference between a first voltage corresponding to the angular position of the DC motor, and a second voltage corresponding to a reference aperture. The integrator provides an output signal corresponding to the output voltage. The current-limiting circuit limits supply of electric current to the DC motor in accordance with the control output signal, and inhibits the supply of the electric current to stop further rotation of the DC motor when the DC motor is rotated to an angular position corresponding to the reference aperture.